

**1. Izembek National Wildlife Refuge and State Game Area**, Alaska. April 1987. This was the United State’s first Ramsar List Designation. The area was selected because of its extraordinary volume and diversity of waterfowl. The area features the largest eelgrass beds in North America.

**2. Forsythe National Wildlife Refuge**, New Jersey. April 1987. This site was elected because of its exceptional significance in the areas of public resource education and scientific research. Forsythe is habitat for several endangered species. Annual waterfowl use is very high, and the area is very popular with bird enthusiasts on the East Coast.

**3. Okefenokee National Wildlife Refuge**, Georgia and Florida. April 1987. This “land of the trembling earth”, as it was known to local Native Americans, was selected because it represents an outstanding example of a large regional wetland complex, with a significant diversity of habitats. Long noted for its great array of plant and animal species, the area affords excellent opportunities for public education and scientific research.

**4. Ash Meadows National Wildlife Refuge**, Nevada. April 1987. This unique ecosystem—a genuine North American desert oasis— was selected because of its great species diversity and its critical importance to several endangered species, including the Ash Meadows pupfish.

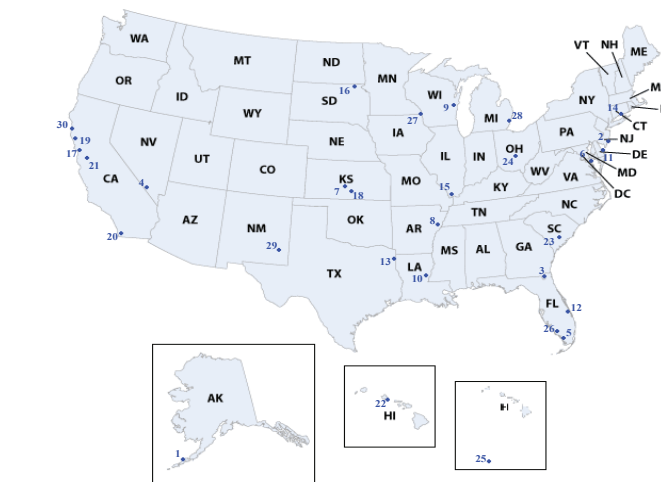
**5. Everglades National Park**, Florida. June 1987. Despite problems of drought, pollution and contested water flow regimens, this area remains synonymous with the term “wetlands” for many Americans. Its continuing values to scientific research as well as its species diversity recommended its selection.

**6. Chesapeake Bay Estuarine Complex**, Maryland and Virginia. June 1987. Once described by H.L. Mencken as a “vast protein factory”, the Chesapeake Bay has long been one of America’s foremost fish and shellfish fisheries, as well as a vitally important wintering and staging areas for migratory birds. The estuarine portion of the Bay selected for inclusion is a particularly rich and diverse area, with a wide range of economic, recreational and environmental values.

**7. Cheyenne Bottoms**, Kansas. October 1988. An extremely important high plains wetlands complex, this area was selected because of the exceptional volume and diversity of shorebirds. The area also demonstrates well the practicality of conservation and wise land use management.

**8. Cache-Lower White Rivers Joint Venture Area**, Arkansas. November 1989. An outstanding regional complex of wetlands, this area features some of the larger remaining tracts of Mississippi bottomland hardwood forest. The area is valuable for endangered species conservation, scientific research and as a wintering area for tens of thousands of migrating ducks.

**9. Horicon Marsh**, Wisconsin. December 1990. This area contains an excellent representation of flora and fauna of wetland habitats of the upper Midwestern region of the United States. The area serves as habitat for endangered species and provides a critical staging and feeding area for the Mississippi Valley population of Canada goose.



**10. Catahoula Lake**, Louisiana. June 1991. The area is subject to seasonal water level fluctuations that support large numbers of migratory waterfowl. This area was selected because of its special value for maintaining the ecological diversity of Louisiana lowlands. Threatened and endangered species are also present.

**11. Delaware Bay Estuary**, Delaware, New Jersey, and Pennsylvania. May 1992. The wetlands associated with this estuary provide a critical resting and feeding area for migratory shore and wading birds. This area affords exceptional opportunities for scientific research and wetlands associated recreation.

**12. Pelican Island National Wildlife Refuge**, Florida. March 1993. This site was the first National Wildlife Refuge designated by President Theodore Roosevelt in 1903 as a “preserve and breeding grounds for native birds”. In addition, the lagoonal waters of the Indian River have special importance as a nursery for juvenile endangered marine turtles.

**13. Caddo Lake**, Texas. October 1993. Recognized as one of Texas’ most important and unique inland, freshwater wetlands, Caddo Lake provides significant and regionally critical habitat for a variety of migratory and resident wildlife species, including waterfowl, raptors, colonial waterbirds, and neotropical songbirds.

**14. Connecticut River Estuary and Tidal Wetlands Complex**, Connecticut. October 1994. At the confluence of the Connecticut River and Long Island Sound the shifting sandbars impede navigation; this situation has served to preserve the largely rural character of the regional landscape and maintain the river’s extraordinary assemblage of natural and relatively undisturbed biotic communities.

**15. Cache River-Cypress Creek Wetlands**, Illinois. November 1994. This site was selected because it serves as an invaluable breeding and stopover area for migratory waterfowl and shorebirds that use the Mississippi flyway. Other animal and plant species that benefit from these wetlands are mammalian predators, native hardwood forests, and individual trees of exceptional age.

**16. Sand Lake National Wildlife Refuge**, South Dakota. August 1998. This refuge is an extremely good example of a large freshwater cattail marsh in the Prairie Pothole Region. It supports millions of birds, including the world’s largest nesting colony of Franklin’s gulls. The 21,500 acre refuge is also important for the conservation of reptiles, amphibians, fish, and mammals.

**17. Bolinas Lagoon**, California. September 1998. The open water, mudflats, and marsh of this area at the south end of the Point Reyes peninsula provide productive and diverse habitats for marine fishes, waterbirds, and marine mammals. The geographical location along the Pacific Flyway also makes the lagoon an ideal staging ground and stopover site for thousands of migratory birds.

**18. Quivira National Wildlife Refuge**, Kansas. February 2002. The refuge is an excellent example of an inland salt marsh, which is very rare in its geographical region. The marsh complex provides critical nesting, migration, and wintering habitat for over 311 bird species, and over one million individuals, including endangered species such as the Least tern, piping plover, and whooping crane.

**19. Tomales Bay**, California. September 2002. As one of California’s largest and least disturbed estuaries, Tomales Bay in Marin County includes important habitats such as tidal marsh, coastal dunes, and eelgrass beds. Over 50 species of waterbirds have been detected at the site. As a critical stopover site for the Pacific Flyway, Tomales Bay supports an average of over 20,000 waterbirds in winter alone, including surf scoter, bufflehead, and greater scaup. The Bay additionally support life-history stages of several species and subspecies of anadromous fish, such as Pacific herring, California roach, steelhead trout, and coho salmon.

**20. Tijuana River National Estuarine Research Reserve (TRNERR)**, California. February 2005. The TRNERR is home to over 370 bird species, including nine federally listed as threatened or endangered, one state listed as threatened, and three regionally rare species found across most of the estuary’s habitats. TRNERR is the second largest home for the federally listed endangered light-footed clapper rail, supporting over 22% of the total estimated population in biogeographic region. Furthermore, TRNERR is the only bi-national watershed in California, sharing its watershed with Mexico; serves as a major stopover for migrating birds using the Pacific Flyway; contains six wetland types under the Ramsar “Classification System for Wetland Type”; and does not suffer the habitat fragmentation faced by other coastal lagoons in southern California.

**21. Grassland Ecological Area (GEA)**, California. February 2005. The GEA lies within the San Joaquin Valley and makes up the largest contiguous block of freshwater wetlands remaining in California. It consists of federal, state, and privately owned seasonal, semi-permanent, and permanent marshes, riparian corridors, vernal pool complexes, and grasslands.

**22. Kawainui and Hamakua Marsh Complex**, Hawaii. February 2005. Sacred to Hawaiians, Kawainui Marsh, the largest remaining emergent wetland in Hawaii and the state’s largest ancient freshwater fishpond, is located in what was once the center of a caldera of the Koolau shield volcano. The marsh provides primary habitat for four of Hawaii’s endemic and endangered waterbirds, and contains archaeological and cultural re-

sources, including ancient walled taro water gardens where fish were also cultivated. Kawainui Marsh stores surface water, providing flood protection for adjacent Kailua town, one of the largest towns on the windward side of Oahu. Hamakua Marsh is a smaller wetland, historically connected to and immediately downstream of Kawainui Marsh, which also provides significant habitat for several of Hawaii's endemic and endangered waterbirds. The Hawaiian Islands are the most isolated high islands in the world, located over 3,220 kilometers (2,000 miles) from the nearest continental land mass, and constitute a distinct biogeographic region.

**23. Francis Beidler Forest**, South Carolina. September 2007. The Francis Beidler Forest within the greater Four Holes Swamp represents the largest remaining virgin stand of bald cypress and tupelo gum trees in the world, and is home to a wide variety of trees, shrubs, flowering plants and other herbaceous species. Designated as an Important Bird Area, the Forest provides habitat for over 140 species of birds and is known to have some of the densest songbird nesting in the country. An abundance of reptiles, amphibians, fish and mammals also depend on the Forest for survival. The Forest, managed by the National Audubon Society, is the first completely privately owned site in the United States to receive the Ramsar designation.

**24. Olentangy River Wetland Research Park** (ORWRP), Ohio. April 2008. The ORWRP is a complex of freshwater riverine and wetland habitats, located on the campus of The Ohio State University, supporting numerous bird species, diverse fish and invertebrate communities, and a wide variety of mammals, amphibians and reptiles. The site also serves to support teaching and research in wetland ecology and management as well as local ecotourism.

**25. Palmyra Atoll National Wildlife Refuge**, Line Islands, Pacific. December 2008. Located approximately 960 nautical miles south of Honolulu, Hawaii, the Atoll has 680 acres of uplands and over 15,000 acres of submerged coral reefs and tropical lagoons. It is described as one of the few remaining corals reef ecosystems with intact food chains and large predator assemblages. The Atoll supports one of the last *Pisonia grandis* forests in the Pacific and more than a million seabirds nest there and use the surrounding waters as forage areas.

**26. Corkscrew Swamp Sanctuary**, Florida. March 2009. Owned and managed by Audubon of Florida, the Sanctuary is located in Collier County just north of Naples, Florida. The Sanctuary encompasses 13,000 acres of upland and wetland habitats, including the world's largest remaining virgin bald cypress forest, and serves as a vital link between several south Florida watersheds. It also maintains critical habitats for threatened and endangered species including the Florida panther and the wood stork.

**27. Upper Mississippi River Floodplain Wetlands**, Minnesota, Wisconsin, and Iowa. May 2009. Encompassing 122,000 acres of backwater wetlands and other floodplain habitats, this site includes the Upper Mississippi River National Wildlife and Fish Refuge, Trempealeau National Wildlife Refuge, Effigy Mounds National Monument, and multiple state managed units in Minnesota, Wisconsin, and Iowa. These wetlands provide habitat essential for the survival of several mussel species, support hundreds of thousands of water birds during spring and fall migrations, and support significant populations of over 100 fish species.

**28. Humbug Marsh**, Michigan. November 2009. This 465 acre marsh represents the last mile long stretch of natural shoreline on the U.S. mainland of the Detroit River. It is an important part of the USFWS Detroit River International Wildlife Refuge, the only international refuge in North America. The wetlands, upland, open water, and island habitat within Humbug Marsh provide habitat for a number of rare plant and animal species. Each year the open water habitat between the mainland and the island serves as spawning and nursery habitat for many species of game and forage fishes. Tens of thousands of migrating waterfowl, passerines, and raptors pass through the Detroit River corridor each year and many stop over in Humbug marsh.

**29. Roswell Artesian Wetlands**, New Mexico. January 2010. Situated along the Pecos River but largely fed by natural groundwater discharge from the Roswell Basin, the 2,266 acres of wetlands includes a series of springs, seeps and sinkhole lakes. These groundwater discharges form sinkhole lakes, streams, springs and seeps, saltgrass marshes, mudflats and seasonally and permanently flooded wetlands which play critical roles in the life cycles of a remarkable diversity of species, including 24 fish species, 352 bird species, 57 mammal species, 62 amphibian and reptile species, and over 100 varieties of dragonflies and damselflies (the largest collection in the world). Several of the sinkhole lakes and springs support unique invertebrate communities including Roswell springsnail, Koster's springsnail, and Noel's amphipod which are all federally-listed as endangered and are found nowhere else in the world.

**30. Laguna de Santa Rosa**, California. February 2010. Spanning 162,560 acres, this watershed and wetland complex in Northern California is a representative of the planet's Mediterranean-type seasonal and perennial freshwater wetland systems, recently identified as the second most at risk biome worldwide. It supports the highest level of biodiversity within Sonoma County, including more than 200 species of birds and 130 species of special concern. The bald eagle, osprey, white pelican and a variety of herons and egrets reside in or migrate through the Laguna, which is also home to mink, river otter, bobcat, coyote, mountain lion, gray fox and rare, threatened and endangered species including Coho and Chinook Salmon, steelhead trout, California tiger Salamander, California red-legged frog, Northern spotted owl and California freshwater shrimp.

**For more information contact:**  
U.S. Fish and Wildlife Service  
Division of International Conservation  
4401 North Fairfax Drive, Room 100  
Arlington, VA 22203  
703/358-1754  
internationalconservation@fws.gov  
<http://www Ramsar.org>

**Follow us on:**  
Twitter @ USFWSInternatl  
Facebook @ USFWS\_International Affairs

Cover: (Left) Dace and fiddler crab. © 2008, Florida Center for Instructional Technology. Full references online at <http://etc.usf.edu/clipart/>. (Right) Sweet Gum *Liquidambar styraciflua* and Common Snipe *Gallinago gallinago*. © Robin Wilson/EC. <http://www.wetland.org>

# United States Ramsar Sites



## Site Map and Descriptions



Updated October 2010